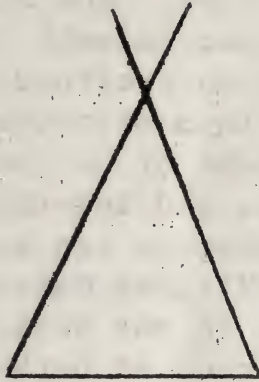


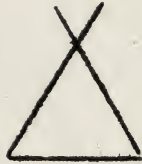
Yellowst
F
722.9
.A1
no. 859

CASCADE LAKE TRAIL



A self-guiding nature trail to
wilderness campsites on the shore
of Cascade Lake

YELLOWSTONE NATIONAL PARK



This pleasant three-mile walk takes you through sage grasslands, pine forest, marshland, and through a typical mountain meadow to beautiful Cascade Lake. The National Park Service invites you to walk this trail, and if you are so inclined, to spend a night or two in a wilderness campsite along the shore of Cascade Lake. Camping permits and information on rental camping equipment can be obtained at the Canyon Visitor Center. There are few better places in our National Parks in which to try your hand at back-country camping.

Camping or not, you will find that this booklet explains much of the natural scene you will see along the way. The numbered stakes along the trail correspond to the numbered paragraphs in this booklet.

Take your time, and have a pleasant trip.

/

Have you ever wondered why trees grow in one place and not another? You are now standing in a large opening within the forest of Yellowstone's high mountain plateau-- a plateau which is almost totally forested. Why do no trees grow here, when they are so common elsewhere on the plateau? No universally accepted answer exists to this question, but most biologists feel that the soil of these high grasslands is in some way different from that of the surrounding forest and inhibits the growth of trees.

Can you explain why the soil here should be different from what it is in the surrounding areas?

2

Look back across the road. You can see that several trees have invaded the open grassland. This process of forest invasion is a very slow one, at least in terms of a human lifetime, but it seems to be a situation occurring throughout the park. As the surrounding forest slowly modifies the soil conditions of the grasslands, these open areas will gradually disappear from the Yellowstone scene.

3

As you enter the forest, notice the abrupt change in the plants around your feet. The dense shade produced by the numerous trees allows only shade-tolerant plants to grow. In a forest of this kind, strawberry, dwarf huckleberry, and kinniknick are typical plants.

4

The LODGEPOLE PINE is the most common of Yellowstone's trees. You can easily identify it by its tall, spindly appearance and by its needle bundles which contain two needles each. The name lodgepole comes from the use to which the tree was put by the Indians of the region. They used the long, straight trunks of the young trees as poles for their lodges or teepees.

It is said that Yellowstone National Park contains one of the largest and finest stands of virgin lodgepole remaining in North America.

5

Notice the strange growths on the nearby trees. These are lichens. The bright yellowish-green one is called WOLF LICHEN, and the black hairlike one is BEARD LICHEN. While at first glance these plants appear to be parasites on the tree, investigations have shown that they use the tree merely for support. Any lichen-- of which there are a great many kinds--is actually an association of two plants, an alga and a fungus. Their growth together as a lichen illustrates a relationship in which a mutual benefit is derived by the association. The fungus component provides a moist, sheltered environment in which the alga can successfully live. In turn, the fungus survives on the food which the alga produces. It is interesting to note that while many of the kinds of algae that occur in lichens can live independently, the fungus component cannot--it is always dependent upon an alga for its survival.

6

The meadows to your right are good grazing areas for elk and deer, as is the forested area through which you are now walking. Yellowstone abounds in both of these large animals. Moose are also occasionally seen in the marshier areas along the trail. Keep your eyes open - there is much wildlife to see here.

7

This pile of cone fragments is a squirrel cache or midden—a common sight in the Yellowstone forest. The western pine squirrel--the only true tree squirrel in the park--stores the cones of the lodgepole in these caches for use during the winter. As the squirrel eats the seeds of the cones, great piles of cone scales and other debris accumulate to produce the sight you see before you.

8

All along the trail are evidences of forest fire. Charred trunks of living trees and burned fallen trees indicate that fire has occurred in this forest in the past.

Fire appears to be vital to the sustained survival of a lodgepole forest. Young lodgepole seedlings cannot grow in the shade of their parents. They need strong sunlight in which to thrive. If fire, wind, and insects did not periodically destroy the parent lodgepoles and allow sunlight to reach the forest floor, only shade-tolerant trees such as spruce and fir could grow. Without fire the lodgepole forest would be slowly replaced by a forest of spruce and fir. The abundance of lodgepole in the Yellowstone country indicates how important a role natural fire has played in the development of the area.

9

The meadow before you now contains the waters of Cascade Creek. But as the ice age drew to a close in this area, some ten thousand years ago, it had a much more important role to play. The present valley of Cascade Creek appears to have been a part of the outlet channel for the large glacial lake which once occupied nearby Hayden Valley. This glacial lake, known as Hayden Lake, drained through this low area across the park's Central Plateau to the Gibbon River drainage. The character of the water-deposited sediments laid down in old Hayden Lake and in this outlet channel produced a soil in which trees cannot readily grow. The old lakes and water-courses which once covered this area are undoubtedly the cause of the open meadows and sage grasslands you have seen along the trail.

10

The mountains you are now facing are a part of the Washburn Range. The peak immediately before you is Mt. Hedges.

//

At this station you can identify the ALPINE FIR. Along with the spruce, alpine fir is a shade-tolerant tree. It's seedlings can grow only within the shade of an already developed forest. In many areas of the park, spruce and fir are growing up beneath a cover of lodgepole pines. If fire, wind or insects do not intercede in this development, the spruce and fir will eventually replace the lodgepole.

The alpine fir can be recognized by its flat needles, the furry feel of the branches when grasped, the smooth, flat bark, and cones which stand upright like candles near the top of the tree.

12

See if you can find the ENGLEMANN SPRUCE near this marker. It is the tree with sharp, squarish needles, shaggy bark, and cones which hang down from the branches.

13

The WHITE-BARK PINE can be recognized by its bundles of needles which contain five needles each. This tree is found growing from about this elevation up to timberline where it is considerably more abundant.

14

The boulder lying near the trail has an interesting story to tell. It is made of a type of rock which does not occur in the nearby bedrock. It must have been carried here from a considerable distance. Geologists tell us that this rock, and many others like it, that lie on the surface here in Yellowstone, was transported and deposited by the great ice sheets or glaciers which covered this area periodically between 10,000 and 1,000,000 years ago.

15

Cascade Lake is to your left. A well-defined trail to your right takes you to the summit of Observation Peak (Elevation 9,300 feet), a distance of approximately three miles. The views from this trail are among the most exciting in the park. From the summit you can see as far as Yellowstone Lake and the Grand Tetons, as well as much of the great panorama of the Yellowstone Plateau.

16

Cascade Lake is a glacial lake--the result of the scouring action of the glaciers which once covered this area. Along with nearby Grebe, Wolf, and Ice Lakes, it lies in the drainage outlet of former Lake Hayden.

If you are camping, you will find campsites on the high ground on the north side of the lake.

At this point, the self-guiding segment of the trail ends. You may continue your hike along the well-defined trail which passes around the north side of the lake -- to Grebe, Wolf, and Ice Lakes. If you wish to return to Canyon from here, it is advised that you follow this trail back.



U.S. Department of the Interior
National Park Service